401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

Addendum to Rationale
Including
Record of Comments and Responses
(Notice of Determination)

General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Hydrostatic Test Water

Permit No. TNR100000

December 13, 2005

Administrative Record

The permit rationale (or fact sheet) dated August 16, 2005, sets forth the Division of Water Pollution Control's (division) basis for permit conditions to be applied statewide for the issuance of the new Tennessee General NPDES (National Pollutant Discharge Elimination System) Permit for Discharges of Hydrostatic Test Water. The Hydrostatic Permit is intended to authorize the discharge of hydrostatic test water from new facilities and from facilities that have been used for the transportation or storage of natural gas, crude oil, or liquid or gaseous petroleum hydrocarbons.

The current Hydrostatic Permit expired on September 30, 2005. On August 22, 2005, the division issued Public Notice #MMV-017, which announced its intent to issue the new Hydrostatic Permit. Copies of the draft Hydrostatic Permit were made available in electronic format on the division's web site at http://www.state.tn.us/environment/wpc/wpcppo/DraftNPDES_Hydrostatic.php. The proposed NPDES permit was drafted in accordance with the provisions of the Federal Water Pollution Control Act, the Tennessee Water Quality Control Act, and other lawful standards and regulations.

On August 22, 2005, the division issued Public Hearing No. 05-012, which announced the public hearing, shown below:

> Monday, October 3, 2005, at 6 p.m. (CDT), in the Ruth Neff Conference Room on the 17th Floor of the L & C Tower, at 4th Ave. and Church Street in downtown Nashville, 37243-1534.

The division received comments through October 13, 2005. This Notice of Determination (NOD) serves as the division's response to questions, comments and issues that were raised at the hearing and/or submitted during the subsequent comment period.

Comments received and responses

1. Comment: A description of discharges should be included in the Rationale.

Response: The integrity of a section of new or used vessel is hydrostatically tested in the field for leaks over a several hour period. After this hydrostatic test, the water is pumped from the vessel to a treatment device for ultimate release to ground and/or surface water. Federal Department of Transportation regulations specify the requirements for testing the vessel.

For pipe, tested sections vary in length and may be several miles long. The amount of water discharged from a test also varies and can range from several thousand gallons to several million gallons. Sections of pipeline that have been in service and have collected condensate and hydrocarbons at low lying points are sometimes cleaned with pigging devices prior to hydrostatic tests. This general permit does not authorize discharges resulting from cleaning operations.

2. Comment: State and EPA requirements should be clarified in the Rationale.

Response: Under State and Federal law and regulations, a discharge permit must establish effluent limitations equivalent to best available technology economically achievable (BAT). For some industry categories, such effluent limitations have already been established by the EPA. This is not the case with discharges of hydrostatic test water; thus, the division will use Best Professional Judgment (BPJ) to choose effluent limitations that meet technology based levels equivalent to BAT.

3. Comment: A summary of permit conditions from the previous permit should have been included in the Rationale.

Response: The previous NPDES General Permit for Discharges of Hydrostatic Test Water was issued on September 26, 2000, and it expired on September 30, 2005. The previous permit protected the quality of waters of the state by regulating the quality of water discharged from hydrostatic testing activities through the following numerical limitations and monitoring requirements:

Facility Type	Parameter	Limit
New facilities	Visible Oil	No distinctly visible floating oil contained on or in the wastewater discharge
Used natural gas pipelines	Visible Oil	No distinctly visible floating oil contained on or in the wastewater discharge
	Oil and Grease	15 mg/l as a daily maximum concentration
	pH	6.5 standard units as a minimum
		9.0 standard units as a maximum
	PCBs*	0.0002 mg/l
Used petroleum product facilities	Visible Oil	No distinctly visible floating oil contained on or in the wastewater discharge
	Oil and Grease	15 mg/l as a daily maximum concentration
	pH	6.5 standard units as a minimum
		9.0 standard units as a maximum
	BETX (total)	0.20 mg/l as a daily maximum
	Benzene	No discharge in amounts that will result in the presence of benzene at a downstream domestic water intake at concentrations above 5 micrograms per liter

*PCBs – an abbreviation for Polychlorinated Biphenyls and means Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260.

In addition to those above, the following requirements were included in the previous permit:

- Volume of flow should be estimated once per discharge.
- The construction, transportation and storage of the facilities to be tested shall be done in such a way that prevents debris and materials from being deposited within the vessel where it may later be entrained in the hydrostatic test water and released to surface or subsurface water.
- The discharger shall use proper engineering practices and Best Management Practices (BMPs) to prevent contamination of hydrostatic test water by fuels, lubricants or waste materials.
- Hydrostatic test water shall be discharged in a manner to prevent erosion of soil or other materials into surface or subsurface water.
- There shall be no distinctly visible floating scum, oil or other matter contained on or in the wastewater discharge.
- The wastewater discharge must result in no other materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.
- If the hydrostatic test water is discharged through an oil/water separator or other wastewater treatment process or device, the hydraulic and contaminant loading shall not exceed the capacity of the oil/water separator or other process or device.
- Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters.

- The volume of water discharged shall be estimated mathematically according to the length of section and the diameter of pipe tested.
- Samples shall be taken in the first 60 minutes of discharge.

4. Comment: The basis for including the limits should have been included in the Rationale.

Response: **The proposed technology based limits and rationale are as follows:**

New Pipelines and Vessels. The division's Best Professional Judgment is that pollution prevention and Best Management Practices (BMPs) are equivalent to BAT for discharges of hydrostatic test water from new pipelines and other new vessels.

The permit will require the following:

- The manufacture, transportation, and storage of the vessels be done in such a way that prevents debris and toxic materials from being deposited within the tanks where it may later be entrained in the hydrostatic test water and released to surface water;
- The discharger shall use good engineering practices and BMPs to prevent contamination of the hydrostatic test water by fuels, lubricants, or waste materials on site;
- That the water be discharged in a manner to prevent erosion of soil or other materials into surface water; and
- That the water be discharged in a manner so that chlorine will be dissipated prior to the discharge entering waters of the State.

Compliance with these and the rest of the hydrostatic general permit conditions will ensure compliance with water quality standards and no degradation to waters of the state.

No chemical analyses of discharges from new vessels will be required. Visual monitoring for the presence of oil in the discharge will be required based on the department's current Water Quality Criteria for Solids, Floating Materials and Deposits (Rule 1200-4-3-.03 (1) (e)).

Used Natural Gas Pipeline. The division's BPJ is that BMPs, including, if necessary, straw bale structure to provide detention, filtration, and adsorption are equivalent BAT for discharges of hydrostatic test water from used natural gas pipeline. Additionally, if a discharger cannot give proof that PCBs are not present in the pipe, then one must use reasonable efforts to clean the pipe prior to the hydrostatic test. A discharger must monitor for the presence of PCBs in their hydrostatic test water if they are unable to certify that PCBs are not present in the pipe.

The division proposes the following limitations for discharges from used natural gas pipelines.

Visible Oil	No distinctly visible floating oil contained on or in the wastewater discharge
Oil and Grease	15 mg/l as a daily maximum concentration
pH	6.0 standard units as a minimum
	9.0 standard units as a maximum
PCBs*	0.00064 µg/l as a daily maximum

*If the discharger can certify that compressors or other equipment that contained PCBs were never used on the pipeline, and the presence of PCBs has not been indicated in the line, neither monitoring nor a limit will be applied.

Visual monitoring for the presence of oil in the discharge will be required based on the department's current Water Quality Criteria for Solids, Floating Materials and Deposits (Rule 1200-4-3-.03 (1)(e), (2)(e), (3)(c), and (4)(c)).

The division has determined that the 15 mg/l limit for oil and grease can be easily achieved with a properly maintained oil-water separator, it is consistent with the oil and grease concentration imposed at other industrial sites, and it is protective of designated uses of all surface streams.

The discharge limits for pH were set between 6.0-9.0 to reflect the department's current Water Quality Criteria for pH (Rule 1200-4-3-.03 (3)(b)).

The discharge limit for compressors or other equipment that has contained PCBs was set at 0.00064 µg/l to reflect the department's current Water Quality Criteria (Rule 1200-4-3-.03 (4)(i)).

Used Petroleum Product Vessels. The division's BPJ-BAT is the same as that for used natural gas pipeline. The division proposes the following limitations for discharges from used petroleum product vessels.

Visible Oil	No distinctly visible floating oil contained on or in the wastewater discharge
Oil and Grease	15 mg/l as a daily maximum concentration
pH	6.0 standard units as a minimum
	9.0 standard units as a maximum
BETX (total)	0.20 mg/l as a daily maximum
Benzene*	5 µg/l as a daily maximum for water body segments classified for domestic water supply
	510 µg/l as a daily maximum for water body segments classified for recreation and not classified for domestic water supply

*For discharges into water body segments designated for domestic water supply or if a domestic water intake is located within five miles downstream, a limit of 5 µg/l will apply. For discharges into water body segments not designated for domestic water supply a limit of 510 µg/l will apply.

The rationale for the limits for visible oil, oil and grease, and pH is the same as that for Used Natural Gas Pipeline.

The daily maximum concentrations for Benzene, Ethylbenzene, Xylenes and Toluene (BETX) were based upon odor threshold values. These odor threshold values were taken from handbook of Environmental Data on Organic Chemicals, Second Edition, by Karel Vershueren (Van Nostrand Reinhold Company, New York, 1982). The previous permit limits were the most restrictive for each effluent characteristic when compared with the Water Quality criteria values, and were retained in the new permit. Monitoring frequencies from the previous permit were also retained in the new permit.

The discharge limits for benzene were set to reflect the department's current Water Quality Criteria (Rule 1200-4-3-.03 (1)(j) and (4)(i)).

The proposed water quality based conditions are as follows:

The discharge limit for PCBs was set at 0.00064 µg/l and the limits for pH were set at 6.0 to 9.0 to reflect the department's current Water Quality Criteria (Rule 1200-4-3-.03 (4)(i)).

The discharge limits for benzene were set as follows:

- 5 µg/l as a daily maximum for discharges into water body segments designated for domestic water supply
- 5 µg/l as a daily maximum if a domestic water intake is located within five miles downstream
- 510 µg/l as a daily maximum for discharges into water body segments not designated for domestic water supply.

These limits reflect the department's current Water Quality Criteria (Rule 1200-4-3-.03 (1)(j) and (4)(i)).

The following standard permit language will be included in the permit:

- The wastewater discharge must result in no other materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.
- Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA § 68-31-101 et seq., and the Tennessee Hazardous Waste Management Act, TCA §68-46-101 et seq.

The monitoring and reporting requirements will be as follows:

Monitoring requirements will be set at once per discharge during the first 60 minutes of discharge.

For one-time discharges, reporting will be required once no later than 30 days after the date the samples are collected.

If a facility will be testing new vessels at one location for numerous times over several months or years, monitoring will be required once per discharge, except only one discharge per month need be sampled, and reports will be required once per month.

5. Comment: A list of high quality waters should be made available on the division's website.

Response: A list of high quality waters can be obtained from the division upon request. The division will make every effort to publish and update the list of impaired and high quality waters on its web site, http://www.state.tn.us/environment/wpc/.

6. Comment: The limit for PCBs should be changed from the water quality criteria of 0.00064 µg/L, which is beyond the capabilities of current EPA approved methods to the Required Detection Level (RDL) of 0.5 µg/L.

Response: The division agrees that the concentration of PCBs established as the water quality criteria cannot be measured using currently available analytical testing technology. The permittee is expected to use the most sensitive test method published in the Code of Federal Regulations (CFR), i.e., 40 CFR Part 136. The current method detection level for PCBs is estimated to be 0.5 µg/L. If tests show the presence of PCBs at or below the method detection limit, then the result should be reported as 0.5 µg/L. If tests do not detect the presence of PCBs, the result should be reported as BDL (below detection level).

Determination

In conclusion, the comments included in this notice of determination document were compiled based on their relevance to the permit content, intent and interpretation of this general permit, rather than implementation of the permit conditions (e.g. penalty evaluations, appropriateness of various enforcement measures, development of TMDLs, etc.). Those questions or comments that became a moot point as a result of the changes made in the final permit were not included in this document.

The division's decision on this matter is to issue a General NPDES Permit for discharges of Hydrostatic Test, Permit No. TNG670000.

DATE:_____

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Edward M. Polk, Jr., P.E.
Manager, Permit Section